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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,797	09/12/2003	David D. Goodman	1796.1011	6152

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EXAMINER	
BRINEY III, WALTER F	
ART UNIT	**PAPER NUMBER**
2615	

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/660,797	GOODMAN, DAVID D.	
	Examiner	Art Unit	
	Walter F. Briney III	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/26/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 26 April 2006 has been entered.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. **Claims 2, 3 and 10-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Park et al. (US Patent Application Publication 2002/0188790).**

Claim 2 is the only claim that is currently amended. Therein, "the path" has been redefined as "being a single twisted wire pair," narrowing the scope of the claim. It is submitted that Goodman discloses such a path being a single twisted wire pair 270 consisting only of two wires 372 and 374. The proceeding section entitled *Response to Arguments* contains a detailed treatment to the applicant's remarks concerning this aspect of the rejection. Aside from this limitation, all other aspects of the rejection of claim 2 are maintained in the form presented in the Final Rejection filed 31 October 2005.

Claims 3 and 10-15 are rejected for the reasons presented above regarding claim 2 as well as the reasons presented in the Final Rejection filed 31 October 2005.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. **Claims 4-7, 9 and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park in view of Goodman (US Patent 6,192,399).**

Claims 4-7 and 9 are rejected for the reasons presented above regarding claim 2 as well as the reasons presented in the Final Rejection filed 31 October 2005.

Claim 17 is limited in part to *the method of claim 3*, as covered by Park. While the Park reference provides means to transmit Ethernet signals over a single two-wire twisted pair, the system of Park completely monopolizes the twisted pair for Ethernet transmission, not allowing other signals to be transmitted at the same time. Therefore, Park anticipates all limitations of the claim with the exception of providing a high impedance to signals above voiceband flowing from the path to a point removed from the path while allowing voiceband signals to pass and be converted to sound.

Goodman teaches a twisted pair communication system. See Abstract. Goodman identifies the above limitation of Park (see column 2, lines 24-33 and column 4, lines 8-9) and seeks to unify the transmission of a plurality of communication standards over a single twisted pair (see column 4, lines 10-15), clearly reducing the cost overhead of laying diverse infrastructure for each transmission standard. Figures 9 and 10 of Goodman clearly depict the network structure. As can be seen from figure

10, Goodman takes advantage of frequency multiplexing in order to provide simultaneous transmission over a single twisted pair (810). It follows that the system disclosed by Park can be expanded to include transmission of several protocols over the single transmission channel (270) by providing a plurality of frequency selective filters within the front end of each converter, i.e. one filter for the digital converter (230) and another filter for the analog converter of figure 8. In addition, all ordinary telephone signals will be received and transmitted through a LPF (1020) as seen in figure 10 of Goodman.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate frequency selective filters as taught by Goodman within the transmission system of Park for the purpose of increasing the amount of communication protocols that can be simultaneously supported by a single unshielded twisted pair within a customer premises, which reduces cost of installation.

Claim 18 is limited in part to *the method of claim 17*, as covered by Park in view of Goodman. As noted in the rejection of claim 4, Goodman teaches frequency multiplexing over a telephone loop. In addition, Goodman teaches means for enabling Ethernet signals over a telephone loop—specifically, filter (1010). Therefore, Park in view of Goodman makes obvious all limitations of the claim.

Claim 19 is limited in part to *the method of claim 18*, as covered by Park in view of Goodman. Power applied to a two ended telephone loop is essentially connected to both ends. Therefore, Park in view of Goodman makes obvious all limitations of the claim.

Claim 20 is limited in part to *the method of claim 19*, as covered by Park in view of Goodman. Because the LAN card and switching hub operate in a half-duplex manner, it inherently follows that the first and second set of signals respectively transmitted by each device occur during first and second interval sets that are substantially non-overlapping. Therefore, Park anticipates all limitations of the claim.

Claim 21 is limited in part to *the method of claim 20*, as covered by Park in view of Goodman. Because the signals are generated using four-wire connections, they are considered 10BaseT signals.

3. Claims 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park in view of Goodman (US Patent 6,192,399).

Claim 8 is rejected for the reasons presented above regarding claim 2 as well as the reasons presented in the Final Rejection filed 31 October 2005.

4. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Park in view of Goodman (US Patent 6,192,399).

Claim 16 is rejected for the reasons presented above regarding claim 2 as well as the reasons presented in the Final Rejection filed 31 October 2005.

Response to Arguments

Applicant's arguments filed 26 April 2006 have been fully considered but they are not persuasive.

With respect to claim 2 on page 6, lines 22-24, of the current response, the applicant alleges that the characterization of Park's element 270 as "providing communication over a single twisted wire pair" actually mischaracterizes the teachings of Park, to which the examiner respectfully disagrees. The applicant asserts this mischaracterization by (1) pointing to paragraphs 27 and 34 of Park that recite, "a pair of 2-wire signal lines of either UTP cable or telephone lines 270." The applicant further asserts that (2) "a careful read of Park makes clear that the term 'signal line' refers consistently to a '2-wire signal line.'" The applicant also asserts that (3) figure 3 shows...that TX+ and RX+ from one PHY are each connected to the respective terminals in the connected PHY. Finally, applicant asserts that (4) the fact that signal lines 372 and 374 are each shown as a single line in the figures does not alter the teaching of Park because four-wire and eight-wire signal lines are also shown as single lines.

With respect to point (1), it is true that paragraph 27 refers to "a pair of 2-wire signal lines," which suggest four wires, however, paragraph 34 clearly refers to "the pair of a first and a second signal lines 372 and 374 of the 2-wire UTP cable or 2-wire telephone lines 270." Therefore, paragraph 34 clearly defines 270 as either a 2-wire UTP cable or 2-wire telephone line comprising a pair of lines 372 and 374. Paragraph 27 appears to be an anomaly (i.e. a typo). Further support for this is provided below.

With respect to point (2), the applicant alleges that a careful read supports the mischaracterization, however, the background of the invention illustrates the desire to broadcast Ethernet over two signal lines instead of the known four and eight wire

schemes. Sustaining the applicant's argument, that 270 comprises four lines instead of two, results in a complete contradiction to the motive of Park's invention. Such a result is nonsensical.

With respect to point (3), if Park intends to transport information between the ports of PHY 310 and 350 directly, why not simply draw four lines between the respective ports instead of grouping them into two pairs? Furthermore, figure 8 clearly depicts that single lines 392 and 394, which correspond to lines 372 and 374, are each connected to both one TX and one RX ports of a PHY.

With respect to point (4), it is noted that all signal lines that are illustrated as single lines, however, any signal line comprising more than one wire is marked with a forward slash or a bus notation, i.e. TXD [3...0]. Signal lines 372 and 374 do not include these annotations, which suggests that they are truly single signal lines. Therefore, as all of the applicant's arguments have been shown to be either moot or unpersuasive, the rejection of claim 2 is maintained.

The rejections of all other claims not addressed above are maintained for the same reasons.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter F. Briney III whose telephone number is 571-272-7513. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WFB

SINH TRAN
SUPERVISORY PATENT EXAMINER